

Assignment 10

Textbook Assignment: "Oxygen-Related Components." Pages 12-1 through 12-33.

<hr/> <p>Learning Objective: <i>Identify, maintain, and perform maintenance on the CRU-79/P chest-mounted oxygen regulator.</i></p> <hr/>	
10-1.	<p>The CRU-79/P regulator has a safety pressure of how many inches of water above the surrounding air pressure?</p> <ol style="list-style-type: none"> 0.5 to 2.0 0.50 to 2.5 0.5 to 5.2 0.50 to 2.0
10-2.	<p>Inches of water is a means of measuring the comparatively high pressure used in testing oxygen regulators.</p> <ol style="list-style-type: none"> True False
10-3.	<p>Safety pressure is maintained by the CRU-79/p regulator up to and including what altitude?</p> <ol style="list-style-type: none"> 50,000 ft 43,000 ft 34,000 ft 25,000 ft
10-4.	<p>The CRU-79/P regulator has a pressure-breathing feature that will maintain a pressure of up to 18.0 inches of water between what minimum altitudes?</p> <ol style="list-style-type: none"> 0 to 25,000 ft 25,000 to 34,000 ft 34,000 to 50,000 ft 50,000 to 60,000 ft
10-5.	DELETED
10-6.	<p>What is the proper procedure to follow if a CRU-79/P regulator fails any inspection or test requirement?</p> <ol style="list-style-type: none"> It is repaired at the squadron level It is repaired at the IMA level It is repaired at depot level It is disposed of in accordance with local directives
10-7.	<p>A special inspection is performed on CRU-79/P regulators at intervals of how many days?</p> <ol style="list-style-type: none"> 10 21 30 90
10-8.	<p>CRU79/P regulators are subjected to a calendar inspection at intervals of at least how many days?</p> <ol style="list-style-type: none"> 30 90 120 220
10-9.	<p>Which of the following test stands is used to test the CRU-79/P regulator?</p> <ol style="list-style-type: none"> 59A120 31TB1995-1 OTS 583 1172AS100
10-10.	<p>When you perform the overload test on a CRU-79/P regulator, how many inches of mercury is maintained on the mercury manometer?</p> <ol style="list-style-type: none"> 1.0 1.85 1.30 1.38

10-11. When you perform the safety pressure test on the CRU-79/P regulator, the safety pressure reading will be indicated by which of the following measurements?

1. Liter per minute
2. Inches in water
3. Pounds per square inch
4. Inches of mercury

10-12. which of the following situations would be the probable cause for a CRU-79/P regulator to start pressure breathing below 35,000 feet?

1. A defective or damaged aneroid assembly
2. The aneroid assembly is too far into the regulator housing
3. The aneroid assembly is too far out of the regulator housing
4. The aneroid sensing diaphragm is installed backwards

10-13. The outlet port of the miniature regulator should never be blocked while pressure is applied to the inlet.

1. True
2. False

Learning Objective: *Identify, maintain and perform maintenance on aircraft panel-mounted oxygen regulators.*

10-14. The panel-mounted regulators incorporate an emergency pressure control lever. Which of the following is NOT a setting for this lever?

1. Emergency
2. 100-percent
3. Test mask
4. Normal

10-15. The low-pressure, panel-mounted regulators have an operating pressure range of how many psig?

1. 50 to 200
2. 50 to 400
3. 50 to 500
4. 50 to 2,000

10-16. A panel-mounted regulator is considered beyond economical repair when the repair cost is more than what percentage of the replacement cost of the regulator?

1. 40%
2. 50%
3. 60%
4. 75%

10-17. A discrepancy found on a CRU-72/A regulator during a transfer inspection should be reported to which of the following work centers?

1. Material control
2. Maintenance control
3. Quality assurance
4. Line division

10-18. Which of the following maintenance activities has the repair capabilities for the panel-mounted regulator?

1. Organizational only
2. Intermediate only
3. Depot only
4. Intermediate and depot

10-19. An acceptance inspection on a CRU-55/A regulator consists of a visual inspection followed by which of the following tests?

1. Outward leak test
2. Inward leak test
3. Functional test
4. Safety pressure test

10-20. To receive oxygen at sea level with an MD-2 regulator, the emergency pressure control lever must be placed in what position?

1. Normal
2. Test mask
3. Emergency

10-21. When you perform a function test on an MD-2 regulator, which of the following indicators would show that the regulator is operating properly?

1. The low-pressure gauge
2. The high-pressure gauge
3. The emergency control lever
4. The flow indicator

- 10-22. Panel-mounted regulators are inspected in accordance with the planned maintenance system (PMS). This inspection CANNOT exceed what maximum number of days?
1. 91
 2. 180
 3. 220
 4. 231
- 10-23. How often, if ever, should the silicone rubber parts be replaced on a MD-1 oxygen regulator?
1. Each time the regulator is disassembled
 2. Each time the regulator is inspected
 3. Each time a function test is performed
 4. Never
- 10-24. Which of the following oxygen systems test stand is used to bench test a panel-mounted regulator?
1. 59A120
 2. 31TB1995-1
 3. 117AS100
 4. OTS 565
- 10-25. Nitrogen supply cylinders used in testing oxygen regulators contain a maximum pressure of how many psig?
1. 2,500 \pm 200
 2. 2,000 \pm 200
 3. 1,500 \pm 200
 4. 2,500 \pm 110
- 10-26. When you perform an inward leakage test on a panel-mounted regulator. What is the maximum allowable leakage in cubic centimeters per minute?
1. 100
 2. 200
 3. 300
 4. 400
- 10-27. To perform the outlet leakage test on an MD-1 regulator, you must apply a film of leak detection compound over the regulator outlet. The film should not advance more than what minimal distance, if any, to be allowable?
1. 1 inch in 15 seconds
 2. 3/4 inch in 20 seconds
 3. 1/2 inch in 10 seconds
 4. None
- 10-28. What is the allowable leakage, if any, for the overall leakage test?
1. 90 psig in 1 minute
 2. 60 psig in 2 minutes
 3. 80 ccm
 4. None
- 10-29. What is the allowable leakage, if any, for the outward leakage test?
1. 0.12 ccm
 2. 120 lpm
 3. 0.12 lpm
 4. None
- 10-30. When you perform the second Stage relief valve test on a panel-mounted regulator, 3 inches of mercury is applied to the regulator outlet through the vent pressure valve on the test stand. The relief valve should vent at how many liters per minute?
1. 10
 2. 25
 3. 30
 4. 45
- 10-31. When you perform the flow suction test on a panel-mounted regulator, the maximum flow through the regulator, with no suction applied, is how many lpm?
1. 0.01
 2. 0.02
 3. 0.05
 4. 0.10

- 10-32. What is the proper procedure to follow if a panel-mounted regulator fails the oxygen ratio test?
1. Dispose of it according to local directives
 2. Perform an aneroid closure test
 3. Perform an emergency pressure test
 4. Replace the venturi assembly

- 10-33. When you perform the aneroid closure test, the aneroid should close within what range?
1. 22,000 and 25,000 feet
 2. 25,000 and 28,000 feet
 3. 28,000 and 32,000 feet
 4. 32,000 and 43,000 feet

- 10-34. The blinker assembly test ensures that the blinker operates correctly with a demand placed on the regulator. When a flow of 12 lpm is drawn through the regulator, with 17.0 inches of H₂O indicated on the pressure/suction manometer, the blinker should be in what position?
1. Fully closed
 2. Half closed
 3. One quarter open
 4. Fully open

Learning Objective: *Identify, maintain, and perform maintenance on liquid oxygen converters.*

- 10-35. Liquid oxygen (LOX) is stored at approximately what temperature?
1. -282°F
 2. -297°F
 3. -282°C
 4. -297°F

- 10-36. The quantity gauge used on a LOX converter indicates the amount of LOX in what units?
1. Pounds
 2. Gallons
 3. Liters
 4. Kilos

- 10-37. When you fill a LOX converter with the use of a servicing trailer, the converter is considered full when what condition exists?
1. The servicing trailer quantity gauge indicates full
 2. The converter capacitance probe indicates full
 3. The servicing trailer stops delivering LOX
 4. A steady stream of LOX flows from the overboard vent

- 10-38. At what approximate pressure does the LOX converter pressure closing valve function?
1. 60 psig
 2. 75 psig
 3. 100 psig
 4. 110 psig

- 10-39. A relief valve is incorporated into LOX systems to prevent excessive pressure buildup. On most LOX systems this relief valve is set to open at approximately how many psig?
1. 50
 2. 60
 3. 75
 4. 110

- 10-40. Additional protection against over pressurization of a LOX converter installed in an aircraft is a relief valve installed in the aircraft oxygen plumbing. This relief valve is set at approximately how many psig?

1. 110
2. 115
3. 125
4. 130

- 10-41. When performing the relief valve test, a pressure of 100 to 120 psig is applied to the relief valve. The relief valve should vent a minimum of how many liters per minute?
1. 50
 2. 100
 3. 150
 4. 200

- 10-42. The converter leakage test is performed with the converter pressurized to how many psig?
1. 55
 2. 65
 3. 95
 4. 110
- 10-43. The time required to fill a 10-liter LOX converter at a filling pressure of 30 psig should NOT exceed what maximum number of minutes?
1. 5
 2. 10
 3. 15
 4. 30
- 10-44. A LOX converter should maintain a pressure of 55 to 90 psig while delivering a flow of how many liters per minute?
1. 50
 2. 100
 3. 120
 4. 200
- 10-45. To prevent moisture from entering the converter during shipment or storage, the converter should be pressurized with gaseous oxygen to a maximum pressure of how many psig?
1. 10 to 15
 2. 15 to 25
 3. 25 to 30
 4. 30 to 40
- 10-46. Liquid oxygen converters are subject to a calendar inspection a minimum of every 231 days. This interval applies to which of the following type converters?
1. Aircraft-installed
 2. Shop spares
 3. Servicing pool
 4. All of the above
- 10-47. When performing a bench test on a liquid oxygen converter, the first step is to find the converter's tare weight. To ensure this is done properly, you must use a scale that has a capacity of at least how many pounds?
1. 50
 2. 20
 3. 30
 4. 40
- 10-48. When you measure the outlet temperature of the purging unit, the temperature should be between how many degrees Fahrenheit?
1. 100 and 125
 2. 125 and 150
 3. 150 and 200
 4. 200 and 250
- 10-49. What is the purging time for a 10-liter LOX converter?
1. 30 to 40 minutes
 2. 45 to 75 minutes
 3. 75 to 83 minutes
 4. 85 to 90 minutes
- 10-50. When you purge a LOX converter, what should be the maximum inlet pressure and temperature?
1. 60 psig and 250°F
 2. 55 psig and 200°F
 3. 55 psig and 250°F
 4. 65 psig and 200°F
- 10-51. When you perform an insulation resistance test on an empty converter, the megohmmeter range selector on the test stand is set on what position?
1. Zero
 2. X-1
 3. X-10
 4. X-100
- 10-52. When you perform the capacitance test on an empty converter, the reading on the test stand should be between how many micro-microfarads/
1. 90.3 to 111.5 (UUF)
 2. 110.5 to 121.5 (UUF)
 3. 150.0 to 250.0 (UUF)
 4. 121.5 to 125.5 (UUF)

10-53. When you perform the relief valve test on a LOX converter, the relief valve relieves a minimum of how many liters per minute with a pressure of 120 psig applied to the converter?

1. 50
2. 70
3. 100
4. 110

10-54. When you perform the fill and buildup time test on a converter, the filling pressure is maintained at how many psig?

1. 30
2. 50
3. 60
4. 70

10-55. What is the maximum time it should take to fill a LOX converter, if the proper filling pressure is maintained?

1. 10 minutes
2. 15 minutes
3. 20 minutes
4. 25 minutes

10-56. After you have completed the fill test, you should perform a pressure buildup test. What is the required time to buildup a working pressure of 70 to 80 psig?

1. 1 minute
2. 5 minutes
3. 10 minutes
4. 15 minutes

10-57. When you perform the capacitance test on a full LOX converter, the capacitance range selector knob is set at which of the following positions?

1. Full
2. 1x
3. 10X
4. 100X

10-58. After a period of 24 hours, the evaporation loss should NOT exceed how many pounds of liquid oxygen when the converter is in the buildup and supply mode?

1. 1 lb
2. 2 lb
3. 3 lb
4. 4 lb

10-59. When performing the evaporation loss test with the converter in the vented mode, the loss should not exceed how many pounds in 24 hours?

1. 5 lb
2. 2 lb
3. 3 lb
4. 4 lb

10-60. When performing the flow test on a liquid oxygen converter, you should apply a flow of 120 lpm. With this flow maintained, the converter should maintain pressures of how many psig?

1. 40 to 55
2. 55 to 90
3. 90 to 110
4. 110 to 115

